REMARKS/ARGUMENTS

These remarks are made in response to the Notice of Non-Compliant Office Action Response of 13 November 2009 (Office Action). As this response is filed within one month time for reply, no fee is believed due. However, the Examiner is authorized to charge any deficiencies or credit any overpayments to Deposit Account No. 50-3610.

Claim Objections

Claims 1-13 were objected to for the use of the word "configured." Applicants have amended the claims to remove the word "configured" and make the claims definite.

Similarly, claims 14-19 were objected to for use of the word "enabling." Applicants have likewise amended the claims to make the claims definite.

Claim 17 was objected to for use of the acronym "MIF." Applicants have amended the claim as suggested by Examiner.

Objection to the Specification

Examiner objected to the terms "computer readable storage medium" in claims 7-13. In amending the claims previously, Applicants pointed to the specification at page 6, lines 26-30. The instant section recites that computer executable instructions may be "***stored on a computer readable medium.***" Examiner cited MPEP 608.01(i) and 37 CFR 1.75(d)(1), which states:

> The claim or claims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims *must find clear support* ***or*** *antecedent basis* in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description

Note that the requirement is that the terms and phrases used in the claims must find "clear support" OR "antecedent basis." The specification, where it states "stored on a computer readable medium" clearly supports the term "computer readable storage medium." A computer readable medium in which computer readable information is stored is a computer readable

storage medium. The instant application describes various memory technologies, which are notoriously well known computer readable storage mediums. Applicants respectfully request withdrawal of the objection.

CLAIM REJECTIONS

Rejections under 35 USC § 101

Examiner rejected claims 7-13 and 14-19 as being directed to non-statutory subject matter. Claims 7-13 are directed to a computer program product, which has been found to be statutory subject matter in *In Re Beauregard* (53 F.3d 1583), recently affirmed by the Board of Patent Appeals and Interferences in *Ex Parte Bo Li* (BPAI Appeal 2008-1213). Where the Board stated:

> "It has been the practice for a number of years that a "Beauregard Claim" of this nature be considered statutory at the USPTO as a product claim. (MPEP 2105.01, I). Though not finally adjudicated, this practice is not inconsistent with *In re Nuijten*. Further, the instant claim presents a number of software components, such as the claimed logic processing module, configuration file processing module, data organization module, and data display organization module, that are embodied upon a computer readable medium. This combination has been found statutory under the teachings of *In re Lowry*, 32 F.3d 1579 (Fed. Cir. 1994). In view of the totality of these precedents, we decline to support the rejection under 35 U.S.C. § 101."

Accordingly, Applicant believes claims 7-13, being drawn to a computer program product, are therefore directed to statutory subject matter.

Claims 14-19 were rejected as being non-statutory for not being tied to a particular machine of apparatus. Applicants have amended these claims to indicate what machine or apparatus is performing the claimed method elements. Accordingly, Applicants contend claims 14-19 recite statutory subject matter.

Rejections under 35 USC § 112, first and second paragraphs.

Claims 7-13 were rejected under 112 first paragraph, and claims 1-19, and 21 were rejected under 112 second paragraph. The two rejections are related due to the wording of claims and specification. Applicants therefore address both rejections

Claim 3 was rejected for use of the limitation of powering up the wireless network adapter while the mobile system otherwise remains powered down. This limitation has been moved from claim 3 to claim 1 in the present response. Examiner contends that this limitation was not originally described or supported by the specification. Examiner has rejected claims 7-13 under this section on the same grounds. Applicants have added this limitation to claim 14 as well. Examiner further rejected claims 1-19 alleging that the specification does not support the wireless network adapter being powered up to respond to the request while the mobile station is otherwise powered off. Examiner contends this is "ambiguous and contradictory."

On page 2, commencing at line 28, the original specification recites:

> **"The mobile system, <u>when in a powered down state, powers its wireless network adapter periodically</u> to poll the access point to discover the stored request for information. The mobile system responds to discovery of the stored request by retrieving the requested information from nonvolatile storage of the mobile system and transmitting the requested information via the wireless network adapter <u>while otherwise remaining powered down.</u>"**

This statement states 1) the mobile system is powered down, 2) the wireless network adapter is periodically powered on "<u>when</u>" the mobile system is powered down, and 3) the powering of the wireless network adapter occurs while the mobile system remains otherwise powered down.

Note that the specification does not say that the mobile system powers up, but that it is specifically the wireless network adapter that powers up. If, as Examiner contends, it were the

entire mobile system that is powered up, Applicants would not have specified particularly that it is the wireless network adapter that powers up. In further support of Applicants' position, Applicants point to page 7 lines 18-23 which states:

> **"After establishing a connection with AP 120, mobile system 130 may become inactive for a duration sufficient to trigger a power transition (block 506) in mobile system 130 from an operational power state to a sleep state in which substantially all major functional components of the mobile system 130 are powered down to conserve battery life. The components that are powered down in this sleep state include the mobile system's wireless NIC 230 thereby rendering the NIC incapable of receiving MIF requests or any other type of network packet from server 102."**

Subsequently, at page 8, commencing at line 30, where the specification again specifically and with particularity recites:

> **"The dormant wireless NIC 230 on mobile system 130 will, at some point, wakeup for the purpose of accessing (block 518) or communicating with AP 120. In one embodiment, NIC 230 is configured to periodically wake up and poll AP 120 to determine if there are any requests pending for mobile system 130."**

This clearly states that the wireless NIC (i.e., the wireless network adapter) is capable of being separately powered up. To further illustrate the distinction between the situation where the wireless network adapter is powered up while the mobile system remains otherwise powered down, and the situation where the entire mobile station is powered up, the specification continues by next stating:

> **"In *another embodiment*, NIC 230 determines if there are any requests pending the next time it associates with AP 120 (e.g., <u>when mobile system 130 is next powered on</u>)."**

As these are described as alternatives ("another embodiment"), they cannot be read as being the same. In this second situation, it is the entire mobile system that is powered up. It is known that networked mobile systems (i.e., those which are battery powered) can be operated in a power

save mode where they go into a low power state and periodically wake up to see if there is any incoming information from an associated access point, as is described by the various IEEE 802.11 family of specification (and referred to by the Fischer reference at col. 8, lines 52-67). What these do not describe, however, is the situation where the wireless network adapter *alone* is powered up. In the present invention only the wireless network adapter needs to wake up because it is polling for a request for asset information, which is made accessible to the wireless network adapter in a manner that allows the wireless network adapter to fetch the asset information, and does not require any other portion of the mobile system to power up. The claimed invention could be used in conjunction with a conventional power save operation of a mobile system in situations where deployed mobile systems have asset information desired by a managing server.

With specific regard to § 112 Second paragraph, Examiner contends there is a contradiction in Applicants' argument; that the specification indicates it is the mobile system performing the responding. The network interface adapter is part of the mobile system. So, of course, from outside the mobile system, when taken as a whole, it is the mobile system that is responding – by virtue of periodically powering up the wireless network adapter of the mobile system while the mobile system otherwise remains powered off, as described by the cited sections of the specification above. It is linguistically conventional to refer to an item as a whole from outside the item, while specifying actions of particular components of the item.

Applicants amended the claims previously to clarify that the wireless network adapter is powered up and responsive to requests at the access point and that this may be performed while the mobile system generally remains powered off. Applicants identified the ambiguousness in the application as filed where the term "mobile system" is used in two different and distinct respects. This is because the NIC is a part of the mobile system, and in some places in the specification, where it is clear the NIC is taking action, the application informally refers to the "mobile system" because the NIC is part of the mobile system. Although those of ordinary skill in the art, upon reading the application, would readily identify the distinction in the use of the

term "mobile system," Applicants amended the claims previously to clarify that the NIC, while part of the mobile system, is performing the response to the request, and that the mobile system may otherwise remain substantially powered off. Leaving the claims as originally filed would have caused the claims to be ambiguous because the specification teaches specifically that that NIC is the part of the mobile system which responds to the request for information. For example, on page 7, lines 18-26, the specification describes the mobile system powering down, reciting that the "mobile system" contains several "major functional components," one of which is the NIC. On page 8 commencing at line 30, it is described that the dormant NIC "on the mobile system" wakes up. Subsequently, on the following page, one embodiment of the invention is described where the NIC wakes up periodically to poll the AP. There is no statement or teaching that, at this point, the mobile system generally is powered on, only the NIC portion of the mobile system is powered on. To further emphasize that the mobile system need not be generally powered up, another embodiment is described subsequently where the mobile system "is next powered on."

In rejecting the claims under this section, the Rejection pointed to the Abstract, where it is stated "The mobile system responds to discovery of the stored request by retrieving the requested information..." However, the Rejection ignores the preceding statement which says "the mobile system, *when in a powered down state*, powers its wireless network adapter periodically to poll the access point..." Generally speaking, the mobile system responds by virtue of its powered on NIC. From the server or access point of view, whether the mobile system is powered on other than the NIC is irrelevant, and it appears that the mobile system is responding even though the mobile system may generally be powered down while its NIC handles the response. Accordingly, one of ordinary skill upon reading the originally filed specification would realize that the NIC is always powered off, and then powered up to check the access point for asset information requests. Furthermore, one of ordinary skill would realize that in one embodiment of the invention, as originally described, the mobile system may remain

generally powered down while the NIC is powered on to check for and handle asset information requests.

Finally, the description of the invention would be read by one of ordinary skill seeking to solve the problem set forth in the background section of the instant application. FIG. 2 shows exemplary elements of a mobile system, where the NIC 230 is coupled to the CPU (the "main" controller of the mobile system) via a bus. It is known that system components or elements may be maintained in different power states, as clearly indicated by the background section of the instant specification which describes the "constantly powered NIC" used in fixed computing systems as indicated in U.S. Patent No. 6,381,636 (cited by Applicants in the Background section). In a constantly powered NIC system, the main components of the system may be powered off or powered down while the NIC remains powered on to respond to asset information requests. The constantly powered NIC is discussed last in the background section, and sets the context for describing the invention. The problem is that, in a constantly powered NIC arrangement, where the NIC is kept powered on while the computing system remains otherwise powered off, the NIC then constantly requires powers. In a mobile system, as Applicant describes in the background, "it is not feasible to supply constant power *to the NIC*." FIG. 2 clearly shows a flash memory 240 dedicated to NIC 230, which facilitates powering up only NIC 230 to respond to asset information requests while the mobile system otherwise remains powered down. The asset information request is particular, and does not require the processing power of a CPU 202, and does not involve any applications which may be executing, such as telephone calls or data applications which may be executed by the CPU as facilitated by system memory 210. Rather, NIC 230 has a dedicated memory 240 for storing asset information so that the NIC, alone, may be powered up to respond to asset information requests.

Rejections under 35 USC § 103

Claims 1, 3-10, 14, and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 7,324,468 to Fischer (hereinafter "Fischer") in view of U.S. Patent Pub. No.

2004/0100394 to Hitt (hereinafter "Hitt"). This includes all pending independent claims 1, 7, and 14.

Fischer has an effective date of 10 September 2003. Applicants file herewith declarations under 37 C.F.R. 1.131 setting forth evidence of prior inventorship. The declarations and supporting documents establish a date of invention at least as early as 9 February 2003, which is well before the effective date of the Fischer reference. Applicants believe that their established priority of inventorship and diligence in preparing and filing the instant application obviates Fischer as an applicable reference.

Fischer describes the "power-save" operation of a mobile or wireless device in which the device is placed into a sleep state, and then awakened either at some interval or upon occurrence of a user input to engage in network communication, as described at the section cited by Examiner in col. 11, lines 37-46. The term "power-save" is well known in the industry and applies to wireless local area network (WLAN) devices complying with standards such as ANSI/IEEE 802.11. Power save operation allows a wireless device to put at least its wireless NIC to sleep for periods, waking the NIC up to check for incoming information by either polling or being polled by the access point. Medium access contention for power save mode has been described at least as far back as 1999 in IEEE literature. Issued U.S. patent no. 7,492,753, which has an effective date prior to that of Fischer, describes an example of power save operation. Examiner may also refer to the online tutorial titled, "Ending the 802.11 Network Card Power Drain" at the URL http://www.wi-fiplanet.com/tutorials/article.php/1015781 which is dated 25 April 2002. These and other references generally describe shutting off the wireless NIC to save power, and turning the NIC on upon the occurrence of a prescribed event (e.g. time out, user input). The device in which the NIC is installed may remain powered on, or powers on and off with the NIC. Fischer describes power-save operation in col. 1 lines 47-58:

> Networked devices operating with limited power supplies may adopt operating characteristics that are conducive to conserving their limited supplies of power. For example, some devices may have an operating mode,

> sometimes called a "sleep mode" or "power-save mode," where the device shuts down or slows down many of its internal functions to conserve energy. Such functions may include, for example, network communication functionality. Such devices may, for example, periodically or on-command exit the power-save mode and re-establish communications with other networked devices.

Applicant notes that Fischer describes that in power save mode the device "shuts down," indicating the device generally powers off, as is the case with Applicant's invention. However, unlike Applicants, Fischer does not describe a situation where the wireless NIC powers up alone, without the device, generally, waking from the low power state. This is because power save mode is conventionally controlled by the main processor of the device due to the fact that if there is information that needs to be transmitted or received, it will typically be processed by the main controller/processor under direction of some application. Fischer is primarily concerned with medium access and access contention methods. Fischer describes that a first device operating in a power save mode exits sleep state (120) and the acquires control of the communication medium (130) using, for example, carrier sensing. The first device then communicates with a second device, which may be an access point (col. 5 lines 1-4). Having gained control of the communication medium, the first communication device then passes control of the communication medium to the second device (150). The benefit of Fischer's method is that the second device does not have to contend for the communication medium as would normally occur because the first communication device would normally release the communication medium, allowing all other devices to contend for the communication medium. By not having to contend for the medium, the second device can communicate any traffic it has buffered for the first device right after the first device passes medium control to the second device, thereby eliminating the usual contention time and allowing the first device to go back into the sleep state sooner than if the second device had to contend for medium control.

Fischer fails to show several aspects of the claimed invention, as claimed in claims 1, 7, and 14. In particular, claims 1, 7 , and 14 recite that the wireless network adapter retrieves

"asset" information. Asset information, described in the background section on page 2, lines 1-5 of the specification, is information concerning the hardware components, software version, and identifiers of the asset. This information is long standing, meaning it doesn't change with any significant frequency relative to data information exchanged between devices such as data for voice phone calls, web browsing, and so on. This allows the asset information to be stored separately from other information, in a non-volatile memory directly connected to the wireless network adapter. The exchange of this information requires no processing, and is not produced by any application being executed by the main CPU of the device. This unique nature of asset information allows the mobile device to wake up only the wireless network adapter and leave the remaining portion of the device powered down. There is no need to power up main CPU and other system components. Fischer, conversely, describes a contention resolution method for regular power save operation. In regular power save operation the device is typically engaged in QOS communication for which there may (or may not) be "traffic," as explained by Fischer in regard to FIGs. 3 & 4 of Fischer. QOS traffic is data that, when present, requires some higher level processing by the device, which means it cannot remain powered off. Certain QOS traffic requires immediate processing, such as when the traffic is related to a data stream being processed by the device, such as voice data for a voice over internet protocol (VoIP) call.

Because Fisher is not concerned with more permanent data such as asset information, Fischer does not contemplate having the memory directly connected to the wireless network adapter. This limitation was initially claimed, for example, in claim 3, which the Rejection contended was shown by Fischer at col. 12, lines 60-67, which states:

> an explicit message to another device transferring control of the communication medium to the other device. Alternatively, for example, the control-passing module 521 may utilize the transceiver module 515 to communicate a null data frame to another device, thus signifying that the first device is no longer utilizing the communication medium and that the other device may then take control of the communication medium.

Applicant finds no mention of memory or of any non-volatile component connected directly to the wireless network adapter or asset information in this section. Applicant's claimed limitation of the non-volatile storage being directly connected to the wireless network adapter is supported by FIG. 2, elements 230, 235, and 240, as described, for example, on page 5 lines 21-24.

Fischer therefore fails to show at least several limitations of Applicant's claims: 1) that the mobile device remains otherwise powered down while the wireless network adapter is powered on to poll for asset information requests, 2) that the mobile device is retrieving asset information, and 3) that the asset information is stored from a non-volatile memory connected directly to the wireless network adapter.

Hitt cited as showing "pull the information from a device to discover the stored request." Applicant's claims have no such limitation. Applicant's claimed invention "poll" an access point. If the access point responds with an indication that there is an asset information request, then the wireless network adapter retrieves the asset information from the non-volatile storage and transmits it to the access point. Hitt shows a plurality of environmental sensors, such as soil probes, which collect data locally, and transmit their collected data to a central processor. The sections cited by the Rejection, 0070 and 0077 describe the transmission of data from the probes to a gateway. Para. 0077 instructs that the probe transmission may be scheduled. Applicant notes that this is substantially different than the claimed polling. The probes will transmit whatever data they have when instructed or scheduled. They do not poll the gateway. They do not transmit asset information.

Combining Fischer and Hitt fails to realize Applicant's claimed invention. The claimed limitations are not shown by the combination of references, given their broadest reading. Accordingly, claims 1, 7 and 14 are allowable over the combination of Fischer and Hitt. Likewise, claims 2-6, 8, 10-13, and 15-19 are allowable as they further define and add to the limitations of their respective independent claims.

Claims 2, 13, 15, and 16 were rejected under 35 U.S.C. 103(a) over Fischer in view of Hitt, in further view of "Wake On LAN – An Overview (hereinafter "WOL").

The claims rejected under this section are all dependent claims, and refine or add to the limitations of the respective independent claims. The failings of Fischer and Hitt are not cured by WOL, which, as Applicant has pointed out before, shows a wired LAN (not wireless) where a computer in the LAN may be remotely powered on, which powers on the entire system, not just the NIC.

Propriety of a subsequent Final Rejection:

Applicants have amended impendent claims 1, 7, and 14. The limitations added to these claims existed in the claims prior to this amendment. For example, modifying "information" in claim 1 to recite "asset information" is supported by claim 6. That the mobile device remains otherwise powered off was previously included in the claims, although Applicants have modified the precise expression for other reasons.

Applicants believe the claims as amended and present herein are allowable over the cited references and such amendments have been made to expedite prosecution and address formal objections and rejections. The substantive aspects of the claims were embodied in the claims, taken as a whole, prior to this amendment. Accordingly, any further searches or new grounds of rejection would not be necessitated by Applicants' amendments herein, and a Final Rejection would therefore be improper.

Conclusion

No cited reference or combination of cited references in the present Office Action shows a mobile system having a NIC which, when the mobile system is otherwise powered down, wakes up, polls the access point for a information request, upon discovering the information request acquiring the requested information from a local memory, and transmitting the requested

information to the requesting server, and thereupon returning to the powered off mode, as substantially claimed in Claims 1, 7, and 14.

Applicants believe that the invention as claimed should be in allowable condition over the cited references. Applicants have made claim amendments which are supported by the specification. No new matter has been added and, as such, Applicants believe that the present invention is in full condition for allowance, which action is respectfully requested.

The Applicants request that the Examiner call the undersigned (**954-745-0374**) if clarification is needed on any matter within this Reply, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

Date: 14 December 2009

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